RE: TECHNICAL SUPPORT DOCUMENT – McCoy Field Risk-Based Approval

To: McCoy Field File
Date: August 24, 2005

SUMMARY

The proposed action is to approve the City of New Bedford's request to clean up and dispose of PCB-contaminated materials at its property known as McCoy Field located on Hathaway Boulevard, New Bedford, Massachusetts (the Approval). This approach is consistent with remedies undertaken at other Superfund and RCRA sites within the region to address soils contaminated with PCBs and/or other hazardous constituents. This approach has also been used at similar end-use sites (e.g. schools) in New England.

BACKGROUND

McCoy Field

McCoy Field (the Site) comprises approximately 7 acres and is located across from the New Bedford High School. The New Bedford High School site operated as the former City burn dump until the late 1960's/early 70's. Historically, burn debris from the burn dump was placed at McCoy Field. In addition, burn material was excavated from the burn dump and placed (piled) on McCoy Field during construction of the High School (at the burn dumpsite) in the 1970's. In or about 1994, the burn debris was purportedly spread across McCoy Field and graded for the purposes of athletic field construction.

As part of its school rebuilding projects, the City selected the McCoy Field site for construction of its new Keith Middle School. Subsequent and limited Site investigations identified low concentrations of PCBs in the debris, as well as metals and semi-volatile organic compounds (SVOCs). As part of the construction project, excavation and off-site disposal of debris was required, and additional sampling was conducted to characterize these materials for off-site disposal. This sampling, conducted in March 2004, identified PCB concentrations at greater than 50 parts per million (ppm). Due to the nature of the contamination, cleanup and disposal of these PCB-contaminated materials are regulated under the federal PCB regulations at 40 CFR Part 761.

The City and EPA entered into a Consent Agreement and Final Order on May 21, 2004 (CAFO) to settle violations of improper disposal of PCBs at the McCoy Field site under 40 CFR Part 761. Under the CAFO, the City paid a civil penalty of $27,500 (for improper disposal of PCBs) and developed a work plan to fully characterize PCB contamination in utility corridors and beneath the proposed new Keith Middle School building footprint. By entering into the CAFO, the City was allowed to dispose of excavated materials based on their existing PCB concentration (e.g. < 50 ppm PCB waste

could be disposed of at a state-approved non-hazardous waste landfill). Without the CAFO, the City would have been required to dispose of all excavated PCB-contaminated material, regardless of concentration, at a PCB chemical waste landfill or at a hazardous waste landfill.

The CAFO specifically focused on the utility corridors and the building footprint since materials from these areas were actively being excavated as part of the Site construction activities. The CAFO was amended in October 2004 to incorporate the excavation and off-site disposal of PCB contaminated materials from the remainder of the Site and adjacent residential properties. During the characterization activities, PCB concentrations up to 46,500 ppm were identified in the Site debris.

The City submitted a request for a risk-based cleanup and disposal approval under the federal PCB regulations at §761.61(c) to address the remaining (unexcavated) PCB contamination at the Site which exceeds the prescribed, allowable level of < 1 ppm (without institutional controls) under the federal PCB regulations. The proposed cleanup includes: (1) removal of PCBs at ≥ 100 ppm in the excavation areas; (2) installation of clean utility corridors; (3) installation of a minimum 3-foot clean soil cap in the landscaped areas; (4) installation of a minimum 2-foot clean cap underneath paved areas; (5) installation of a passive vent system, solid vapor barrier, and 2-foot clean cap in the building footprint; (6) filing of an Activity and Use Limitation, which will detail permitted and non-permitted uses on the Site (i.e. an institutional control used to prevent recreational uses); and (7) long-term monitoring and maintenance of the caps and monitoring of groundwater and indoor air quality in the new Keith Middle School. The purpose of the long-term maintenance and monitoring is to ensure that the integrity of the physical controls (e.g. the caps) is maintained and to ensure that the PCBs do not migrate from the Site.

Adjacent Wetlands, Private Properties, New Bedford High School and Other Properties

The City's request does not directly address PCB-contamination in the adjacent wetlands, on private properties, or at the existing New Bedford High School. Based on the available information to date, PCBs, metals, and/or SVOCs have also been found at the High School property and in the wetlands.

- The High School sits on the former burn dump site. While no PCBs have been found in surface soils, PCBs at < 50 ppm are present in subsurface soils. Additional assessment is required to complete contaminant characterization in the soils. Remediation is planned for 2006. Since no PCB concentrations > 50 ppm have been identified at this site, no final determination has been made on EPA's regulatory role in remediation of the High School soils. In addition, no assessment of potential PCBs sources inside the High School has been conducted. Given that the High School is located on the former burn dump site and that the High School was constructed in 1970, the PCB Approval requires that the City conduct an assessment of potential PCB sources at the High School, both indoors and outdoors. The Approval also requires the City to submit its cleanup plan to

EPA for review and approval and/or to provide information to justify that no cleanup is required under the federal PCB regulations and that the cleanup is governed under the MADEP regulations.

- PCB contamination has been found in wetland sediments at up to 18 ppm and appears to be attributable to overland run-off of soils from the McCoy Field site. The City submitted a separate cleanup plan to address contamination in the wetlands on June 21, 2005. The City has proposed a PCB cleanup standard of less than or equal to 1 ppm (≤ 1 ppm) PCBs. This cleanup plan is currently under review by EPA. EPA has posted the proposed wetland cleanup plan on its website. It is estimated that remediation of the wetlands may occur as soon as mid-to-late fall, 2005 under a separate EPA-TSCA approval. The wetlands are located down gradient of McCoy Field. It is unlikely that PCBs will migrate from the McCoy Field site into the wetlands via the groundwater pathway due to the physical and chemical nature of PCBs. Overland migration is highly unlikely since the Site will be covered with clean soil and/or asphalt. Regardless, long-term groundwater and sediment monitoring will be required to determine if PCBs are migrating from the Site and into the wetlands. The Approval allows EPA to require additional remedial measures to address off-site migration.

- At this time, the City has obtained access agreements to some of the nearby private properties to determine the extent of PCB impacts. The City has met with the remaining potentially impacted property owners and is working to secure access agreements to these properties. A sampling plan for assessment of these properties is under review by both EPA and ATSDR. Samples collected in right-of-way areas adjacent to privately-owned properties, indicate PCB contamination at < 50 ppm. As with the High School site, the Approval requires the City to submit its cleanup plan to EPA for review and approval and/or to provide information to justify that no cleanup is required under the federal PCB regulations and that the cleanup is governed under the MADEP regulations.

- Several athletic fields and the existing Keith Middle School are located in close proximity to the High School and to McCoy Field. Thus, there is a possibility that contamination from the burn debris may exist at these locations. Based on information provided verbally by the City to EPA, soil sampling has been conducted at the existing Keith Middle School and no contaminants of concern were identified. No sampling information is currently available on the athletic fields. Given the current use of these properties, the Approval requires the City to conduct an assessment and (if PCBs are found) to submit its cleanup plan to EPA for review and approval and/or to-provide information to justify that no cleanup is required under the federal PCB regulations and that the cleanup is governed under the MADEP regulations.

NATURE OF ACTION

The PCB regulations provide great flexibility for cleanup and disposal of PCB-contaminated materials by allowing the responsible party to select a cleanup approach. One of the options, the risk-based cleanup and disposal option, allows a site owner to leave on-site residual PCB contamination above the default cleanup levels, provided there is no unreasonable risk to human health or the environment. A site owner must present documentation to EPA to support the cleanup proposal (normally in the form of a risk assessment) and must receive approval from EPA prior to performing any work.

Risk Assessment

The City provided a human health risk assessment to support its remedial approach at the Keith Site. This assessment and the proposed remedial standards were reviewed by EPA's risk assessment contractors and were found to be consistent with EPA methodologies and within risk guidelines. The risk assessment considered the risk from dermal, ingestion, and inhalation exposures to site contaminants (both outside and inside the proposed school building), including PCBs, metals, and SVOCs. Given that a cap and a vapor barrier are proposed as part of the remedial actions, no complete exposure pathways were identified, and therefore no quantitative risk determination could be made. If the vapor barrier and caps are properly built and maintained, there will be no complete exposure pathways and there will be no quantifiable risk to site users.

However, as a conservative measure and to provide additional information on possible risk, EPA required the City to consider the risk from exposure to PCBs in indoor air if the vapor barrier was not used underneath the building footprint. For children, the cancer risk for indoor inhalation of volatilized PCBs (in the absence of a vapor barrier) indicates an excess lifetime cancer risk of 7×10^{-10} and a non-carcinogenic effect of 0.0008. The cancer risk for adults from indoor inhalation of volatilized PCBs (in the absence of a vapor barrier) indicates an excess lifetime cancer risk of 8×10^{-9} and a non-carcinogenic effect of 0.003. In considering all site contaminants including PCBs (in the absence of a vapor barrier), the calculated excess cancer risk is 6×10^{-7} with a 0.02 non-carcinogenic effect. All these results are still well below EPA's acceptable cancer risk range of 1×10^{-4} to 1×10^{-6} and acceptable non-carcinogenic effect of 1.0 under Superfund. Therefore, the addition of the vapor barrier as well as the long term monitoring and maintenance plan, provide additional levels of protection to ensure there will be no complete exposure pathways and no risk to site users as long as the vapor barrier and caps are properly built and maintained. This will be monitored by the results of the groundwater, sediment, vent gas and indoor air monitoring which will be submitted to EPA and the MADEP.

Approval Conditions

The attached Approval allows the City to clean up and dispose of PCB-contaminated media under a risk-based cleanup and disposal approach at the McCoy Field site. The Approval requires the City to submit for EPA review and approval, work plans for the

long-term monitoring and maintenance program for the caps, for groundwater and sediment monitoring, and for vent gas and indoor air monitoring. These work plans must include specific details on the monitoring and maintenance activities, including the actions that will be taken to address any potential repair of the cap and actions to be taken should PCBs be found during groundwater, sediment, vent gas, or indoor air monitoring. Such actions will require EPA review and approval.

To address public concerns raised during public meetings, the Approval also requires: (1) the City to submit a communication plan which details how the monitoring/maintenance activities and results will be communicated to Site users, the public and other stakeholders; and (2) the City to submit a worker training plan which details requirements for on-going training of workers conducting routine site work, such as landscapers, so as not to disturb the controls in place. The Approval also reserves EPA's right to require the City to undertake additional measures if EPA determines that the PCBs at the Site are creating an unacceptable risk to site users and/or if PCBs are migrating from the Site.

Given that PCBs above 1 ppm will remain at the Site, following completion of remedial activities, the City must record an Activity and Use Limitation with the property's deed, which will identify permitted and prohibited activities at the Site, including use as recreational areas.

STATE AND LOCAL REGULATORY COORDINATION

Given the contaminants (PCBs, SVOCs and metals) present, cleanup of the Site is regulated under both the federal PCB regulations and the state regulations under the MCP. EPA and the Massachusetts Department of Environmental Protection (MADEP) have been coordinating closely on this project. While EPA's Approval will only address PCBs, the risk evaluation did consider all site contaminants. Further, the long-term monitoring and maintenance work plans will consider all site contaminants. MADEP will be reviewing the adequacy of these plans with respect to non-PCB site contaminants, and will make any additional adjustments necessary to protect public health through its own regulatory process.

The TSCA PCB Regulations do not require public participation. However, given the public interest in this cleanup and site reuse, EPA published notification of a public comment period on the draft PCB Risk-Based Cleanup and Disposal Approval in the *New Bedford Standard Times* on June 14, 2005. This notification was also sent to over 200 PIP participants. EPA also held a public information meeting on June 22, 2005 to provide information on the remedial plan, to answer questions, and to clarify that EPA was seeking comment on the technical elements of the draft approval. During the meeting, the following issues were identified and discussed:

Some attendees stated that:

- The Site repository (documentation of site characterization, design plan, etc) was not well organized and information was missing and/or hard to find; and
- The public had not been informed of what was being proposed for McCoy Field since documents were not readily available.

  EPA Answer: As follow-up to this meeting, EPA posted all documents relevant to the McCoy Field Remediation on EPA's website. In addition, a formal process for document review was put in place by the City to assure that the repository documents were maintained and were entact. EPA also extended the comment period for an additional 2 weeks. The comment period ended July 29, 2005.

- Concern was expressed over the City's decision to site the Keith Middle School on a contaminated property.

  EPA Answer: EPA has regularly attended these public meetings and has repeatedly stated that EPA's responsibility is to ensure that the school is safe (that users are protected from exposure to contaminants at the Site), and that EPA does not have authority over local school siting decisions.

- An attendee opined that EPA should not approve the cleanup plan as proposed, and should require all contamination to be removed before the school is constructed.

  EPA Answer: As previously discussed, the PCB Regulations allow PCBs to be left in place provided that the PCBs pose no unreasonable risk to public health or the environment.

- Concern was expressed over the City's ability to follow through with the long term monitoring and maintenance requirements.

  EPA Answer: EPA will oversee the City to ensure that it follows through with its requirements.

- There was a question as to EPA's regulatory and enforcement authority to ensure the City meets its obligations on the cleanup and on the long-term monitoring/maintenance.

  EPA Answer: EPA has the authority to ensure that the conditions of the Approval are met, and will monitor compliance.

- EPA was heavily criticized for not taking enforcement action against the City for beginning construction prior to issuance of the TSCA Approval.

  EPA Answer: EPA advised the City that it was proceeding at its own risk. EPA also advised the City that no activities should be conducted that would impede the City's ability to implement the technical design proposed in the Application or any additional measures EPA could potentially require under the final approval. The City assured EPA that contamination at the Site would not be disturbed. EPA reserved its right to take any appropriate enforcement action.

- Allegations of environmental injustice were made.

  EPA Answer: EPA does not find grounds to support these allegations, as the project is protective of human health and the environment.

Public Comments

During the comment period, EPA received two sets of written comments related to technical remedial design issues, to risk assessment methodologies, and to long-term monitoring/maintenance. These comments and EPA's responses are found in Attachment 3, EPA Response to Comments.

EPA was also requested to incorporate the Superfund Public Participation process in its review of the McCoy Field cleanup by extending the comment period until August 1, 2005; allowing a response period of 60 days; and conducting a 30 day public hearing process. EPA did consider this request but opted not to act on the request for the following reasons. The PCB regulations under the Toxic Substances Control Act (TSCA) do not require any public participation. In this matter, EPA had already decided to provide an extended public review/comment period; the public thus had adequate time to review and to comment; and, there was little potential for new information to be submitted that would alter EPA's evaluation of the proposed cleanup.

RECOMMENDATION

Based on EPA's review of the information provided by the City and in consideration of the comments submitted by the public and raised through public meetings, the City's proposed risk-based cleanup and disposal plan complies with EPA regulatory requirements for remediation of the PCB-contaminated materials. Based on the risk assessment, following implementation of the remedial activities, there will be no unreasonable risk to public health or the environment. This will be monitored per approved work plans and EPA has the ability to impose any additional measures should that become necessary. Monitoring must continue until both EPA and MADEP

determine monitoring is no longer necessary or required. Finally, this approach has been used at school sites in New England contaminated with chemicals having similar chemical properties to PCBs, with successful results that have not compromised public health. For example, under MADEP oversight, the Stoklosa Middle School in Lowell, MA and two schools in Everett (the Lafayette School and Madeline English School) were constructed on contaminated sites. The physical controls used at McCoy Field are similar to the controls used at these sites. Therefore, EPA recommends the issuance of the attached Approval.